

## REMARKS

This application has been reviewed in light of the Office Action dated March 24, 2008. Claims 12-20 are the only claims presented for examination. Claims 12, 16, 17 and 20 are in independent form, and have been amended to define still more clearly what Applicant regards as his invention. Favorable reconsideration is requested.

In the outstanding Office Action, Claims 12 and 16-20 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patents 5,185,661 (Ng) and 6,421,142 (Lin et al.) taken in combination, Claim 13, as being obvious from those patents in view of U.S. Patent 6,058,207 (Tuijn), and Claims 14 and 15, as being obvious from *Ng* in view of *Lin* and the Berns et al. article.

As shown above, Applicant has further clarified the language of the independent claims, by making it still more explicit that a first color gamut is mapped to a second color gamut in consideration of a color change in the first color gamut.

In the aspects of the present invention set forth in the respective independent claims, the color change in the first color gamut is defined by using surface gradation lines and internal gradation lines. Here, the surface gradation lines indicate a characteristic of the color change on the surface of the first color gamut, and the internal gradation lines indicate a characteristic of the color change inside the first color gamut.

To define the color change with high precision, according to each of the independent claims, Applicant recites “setting a plurality of independent surface gradation lines based on the first sample points and a plurality of independent internal gradation lines based on the second sample points, one of the surface gradation lines being defined by a function indicating a continuous locus linking the plurality of sample points in the first

sample points, and one of the internal gradation lines being defined by a function indicating a continuous locus linking the plurality of sample points in the first sample points”.

To map the first color gamut to the second color gamut in consideration of the thus-defined color change in the first color gamut, the claims further recite

“obtaining third sample points by mapping the first sample points into the second color gamut, and obtaining fourth sample points by mapping the second sample points into the second color gamut”,

“...mapping the plurality of independent surface gradation lines based on the third sample points, and mapping the plurality of independent internal gradation lines based on the fourth sample points”,

“calculating a relative position of an input color to the surface gradation lines or the internal gradation lines”, and

“calculating an output color from the plurality of independent mapped surface gradation lines or the plurality of independent mapped internal gradation lines, based on the relative position”.

As a result of these features, it is possible to map the first color gamut to the second color gamut in consideration of the color change in the first color gamut.

In the Office Action (page 4, second paragraph), the Examiner recognizes that *Ng* does not describe any process corresponding to the process of the present invention concerning the surface gradation lines and the internal gradation lines, and cites *Lin* for those features. Applicant has studied *Lin* and submits that, in fact, that patent also does not disclose or suggest the surface gradation lines and the internal gradation lines.

The Office Action specifically cites col. 11, lines 43-55, of *Lin* as describing the surface gradation lines. The *Lin* apparatus performs mapping of an out-of-gamut color to a gamut boundary by using plural lines like the dotted line that joins point 134, outside the gamut, and the intersection of the  $a^*$  and  $b^*$  axes (that is, a point on the L axis), as shown in Fig. 9. This dotted line intersects the boundary of the gamut at point 135. However, the dotted line in Fig. 9 of *Lin* is different from the surface gradation lines recited in Applicant's independent claims. *Lin* makes very clear that the dotted line is a line linking the out-of-gamut color and a point on the L axis, that is, this is in fact *not* a line *on the surface* of the gamut, but rather a line that *intersects* that surface.

Therefore, the line in question does not remotely meet the claim recitation of setting a gradation line on a surface of the first gamut, particularly with “one of the surface gradation lines being defined by a function indicating a continuous locus linking the plurality of sample points in the first sample points”, as recited in each independent claim.

Moreover, a person of ordinary skill would have found in *Lin* absolutely no suggestion of using surface gradation lines, either in the manner recited in Applicant's claims, or in the *Ng* apparatus, or in any other fashion: the line in question in Fig. 9 of *Lin* indicates the *direction* in which the out-of-gamut color at point 134 is *projected* onto point 135 that is on the gamut surface. This could not in any fashion suggest a surface gradation line indicating a locus of color change in the first color gamut as in the present independent claims.

As to the internal gradation lines recited in the independent claims, the Office Action cites *Lin* at col. 18, line 65, through col. 19, line 8. This passage of *Lin*,

however, describes a process for improving the accuracy of in-gamut color in an LUT. More specifically, the accuracy is confirmed by comparing the colorimetry value of a color patch other than the lattice point of the LUT with the interpolation result of the LUT. Then, if the accuracy is poor, the patch is printed to correct the LUT. This process does not correspond to the internal gradation line in Applicant's claims, particularly with "one of the internal gradation lines being defined by a function indicating a continuous locus linking the plurality of sample points in the first sample points".

It is also noted that the Office asserts that *Lin* and *Ng* are combinable in that "it would have obvious ... to treat conversion areas independently of each other, as taught by *Lin*." Since in fact *Lin* does not disclose the surface gradation lines and internal gradation lines recited in Applicant's claims, however, there is no way in which a person of ordinary skill could have been led by *Lin* to modify *Ng* in such manner as to have led to Applicant's claimed invention.

Namely, no possible combination of *Ng* and *Lin* in any way suggests Applicant's process concerning the surface gradation lines and the internal gradation lines, and in particular, no possible combination thereof suggests "calculating a relative position of an input color to the surface gradation lines or the internal gradation lines" or "calculating an output color from the plurality of independent mapped surface gradation lines or the plurality of independent mapped internal gradation lines, based on the relative position", as recited in Applicant's claims.

Applicant therefore submits that independent Claims 12, 16, 17 and 20 are allowable over those two patents, taken separately or in any possible combination.

A review of the other art of record, including *Tuijn* and *Berns*, has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from Claim 12, and also are believed to be clearly patentable for the reasons discussed above. Nevertheless, because each dependent claims recites an additional aspect of the invention, the independent reconsideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and allowance of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

/Leonard P Diana/

Leonard P. Diana  
Attorney for Applicant  
Registration No. 29,296

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200